

removes all doubt. For distinctions between species of *Nephroma*, see *N. resupinatum*.

*Nephroma laevigatum* SMOOTH SWISS LICHEN

A subspecies differing from *N. helveticum* in the absence of marginal or other growths from the upper surface, and of most of the down from the under. This lack makes it even more difficult to recognize, yet one already familiar with *N. helveticum* can name it at once. It should be studied in connection with that subspecies. There are also intermediate forms.

*Nephroma parile*. POWDERY SWISS LICHEN

A subspecies of *N. resupinatum* resembling *N. laevigatum* but with whitish, dusty soredia along the margins and clustered on the upper surface. This is the only local *Nephroma* having soredia. Found on trees in the north, perhaps not within the New York area.

(Group 7 to be continued)

RIDGEWOOD, N. J.

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BOOK REVIEWS

**Trees of the South\***

ARTHUR HARMOUNT GRAVES

The situation with regard to books about trees seems to be similar to that concerning text books of botany. It would seem that every botanist who *is* anybody has written, is writing, or will write a text book of botany. And everyone knows that the books about trees are legion. And yet, as the Book of books says, "Of the making of many books there is no end."<sup>1</sup> I have always taken this as meaning not a countless repetition of the same old thing, but that new, and ever new, outlooks, new treatments of the subject

\* *Trees of the South*. Green, Charlotte Hilton. Univ. of North Carolina Press, Chapel Hill, N. C. 551 p. \$2.50.

<sup>1</sup> Ecclesiastes 12.12.

matter, new facts—or facts presented in a new way—are possible. The combinations and permutations here are as great or greater than they are in music or art. Do musicians or artists think that the field of composition has been or ever will be exhausted? Not at all: as long as there are different individuals, i.e., different personalities, there can always be something new. For, is not the book, the musical score, or the painting, in reality the *expression* of the individual?

The principal motif adopted by Mrs. Green, out of which she composes her charming symphonies, is the idea of companionship. The trees are our friends. They are our companions through life, and hence their peculiarities, likes and dislikes, their appearances at different seasons of the year, should mean something to us. Thus Mrs. Green (who is, in reality, a poet equipped with the requisite scientific knowledge) charmingly writes: "The dogwood is the 'loveliest lady of the wood,' lifting delicate tracery of bare branches tipped with silvery pearls that hold the promise of next spring's white bloom. The American elm is a stately matron with graceful, inviting curves and noble dignity. The beeches are the Quaker ladies of the forest, wearing sedately their smooth gray bark wrapped tightly about them. The sycamore is the white-haired dowager among trees, still vain enough to lean over woodland pools and admire her mottled reflection in the cool water beneath."

There are some who will fling gibes at all this. But why? Are there not other things in this world of ours beside cold, hard facts? One of the wisest men the world has ever known once said, "Everything has its beauty, but not everyone sees it."<sup>2</sup>

One must not get the idea from this that the book doesn't have the "cold, hard facts." It does, but they are treated in such a way that they don't seem cold and hard. Part 1 is devoted to the tree considered in a general way—its parts, its flowers, fruits, seeds and economic importance. Part 2 considers the different tree species by families: thus, the Willow Family, the Sweet Gale Family, the Walnut Family, the Beech Family, etc. The distinguishing characters of each species are clearly explained and graphically illustrated.

<sup>2</sup> Confucius (551-478 B.C.) Analects.

Mrs. Green's book also bring out many interesting things concerning the "folklore" of trees, a subject on which much remains to be written. In addition, this being a book on trees of the Southern States, many species are included with which we at the north are less familiar, such as the Chinaberry, the Crape Myrtle, the Loblolly Bay, the Silver Bell and Snowdrop trees (*Halesia*) and the Sweetleaf, besides the southern pines. In addition, of course, most of the trees of the north are described.

Mr. J. S. Holmes, State Forester of North Carolina, who, I am proud to say, was once a pupil of mine at the Yale School of Forestry, has written a splendid foreword. The illustrations, of which there are many throughout the book, are admirable. I do not see how they could be improved. It is, altogether a beautiful book, and it is a pleasure to have the opportunity of reviewing it.

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## Two New Books on Genetics

R. C. BENEDICT

### Sturtevant and Beadle, *An Introduction to Genetics*\*

"Genetics is a quantitative subject. It deals with ratios, with measurements, and with geometrical relationships of chromosomes. Unlike most sciences which are based largely on mathematics, it makes use of its own system of units." The preceding, the opening sentence of the Preface of Sturtevant and Beadle's new text, "An introduction to genetics," furnishes the keynote for the volume.

The book is significant in a number of ways. First, it is of interest to have a text-book treatment in formal genetics of which one of the authors was a chief collaborator with Morgan in establishing modern genetics. Second, it is important to have the point of view of genetics as a quantitative subject rigorously carried out in a book for class use. Third, the text is valuable for the recency and comprehensiveness of its factual data, and its discussion of their implications and applications. Recent advances in cytology during the past few years seem to have led to an enlarged understanding of the mechanics and significance of mitosis and

\* An introduction to genetics. Sturtevant, A. H., and Beadle, G. W. G. W. Saunders. 1936. \$3.25.